

# MACal 9800 CAST

## OPENING NEW HORIZONS



*The future is bright! 40 years of experience in CAD/CAM lie behind this new material, which has been developed to add even more conformability to all of the renowned benefits of the MACal 9800 Pro Series. This new feature now allows marking and branding on a wider range of flat-to-curved surfaces (with very good adhesion and easy removal). 117 colours are available to help you do your magic - 107 glossy and 10 matt, HT and BF versions in black and white - as well as custom colours at low minimum order quantities\*. The new MACal 9800 CAST films open new horizons.*

### Advantages:

- **Very good conformability** on rivets and corrugations
- **High quality marking film** with a wide palette of bright opaque and long-lasting colours
- **high quality pigments** and a solvent adhesive formulation avoiding colour fading, cracks, edge-lifting, shrinkage etc.
- Trouble-free **cutting and weeding**, of even small letters, with outstanding controlled release and improved paper cohesion
- Efficient weeding of white films, with a blue **contrast liner**
- Very good **adhesion** on flat-to-curved surfaces
- **Easy removal with no residue**, thanks to a special production process
- **Very low shrinkage**, due to a highly cohesive adhesive formulation avoiding dirt around the edges
- **21 brand new colours** to enrich design palettes, including blues, reds and greys
- **Colour matching service:** your new custom colour in only 4 weeks! Minimum order quantities\*:
  - 10 rolls for a new colour with standard permanent adhesive
  - 26 rolls if HT or BF adhesive is required on one of the 117 standard range colours

\*colour matching incurs an additional cost

# MACal 9800 CAST



*Long term branding applications need high performance films - giving you the right quality both on installation and over time. With up to 10 years durability, and a higher conformability, MACal 9800 CAST Series is the right choice for long lasting applications on a wide range of surfaces.*



## **Durability:**

- 10 years** (black and white)
- up to 8 years** (colours)
- 5 years** (metallic colours)



## **Applications:**

MACal 9800 CAST is designed for:

- long-term vehicle marking (car, trucks, boats...),
- window graphics,
- decorative & retail signage panels,
- any other branding purposes including surfaces with rivets and corrugations.



## **Technical characteristics:**

- 66µm conformable cast vinyl
- High-performance permanent adhesive
- Fire rating: M1, Euroclass EN13501-1 (Cs1D0). Complies with REACH regulations

Disclaimer: MACal 9800 CAST range is available only in the following countries : Germany, Austria, Switzerland, Belgium, Holland, Luxemburg

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# MACal® 9800 HT CAST

## Technical Data Sheet

### PRODUCT DESCRIPTION

MACal 9800 HT CAST are polymeric stabilized cast vinyl films coated with a durable permanent high tack adhesive giving excellent dimensional stability.

MACal 9800 HT CAST is designed for computer cutting and fast weeding for difficult substrates

### CONSTRUCTION

#### **Face material :**

Polymeric stabilized cast vinyl, 66 µm thick, cadmium-free.

#### **Adhesive :**

Clear solvent based high tack permanent acrylic adhesive.

#### **Liner :**

Stable 135 gsm white kraft paper with grey backprinting.

For white vinyl the liner is coated with a blue silicone coating to improve the contrast with the film colour.

NB : **CONTRAST B** ensures a clear view during the stripping process therefore improving productivity.

### TYPICAL USES

MACal 9800 HT CAST is designed for long term interior and exterior marking applications (POS, wall signs...) on non-smooth or slightly porous surfaces like matt painted walls, MDF etc.

MACal 9800 HT CAST provides ideal conformability over flat to curved surfaces with rivets and simple corrugations.

### EXPECTED DURABILITY

The expected vertical outdoor durability of the unprocessed product in central Europe (Zone 1) is up to:

10 years : white and black.

This information is based on successful real life experience and artificial aging according to ISO 4892-2.

**Note :** Exposure to severe temperatures and ultraviolet light, as well as conditions in southern European countries, and also in tropical, sub-tropical or desert regions, will cause a more rapid deterioration. This also applies to polluted areas, high altitude, horizontal and south-facing exposure.

### SHELF LIFE

2 years when stored at 15 to 25°C and ± 50 % relative humidity.

### PHYSICAL PROPERTIES (Typical values)

**Thickness (mm)** (Film + adhesive) ISO 534  
0.095

**Face Material Data, 23°C** DIN ISO 527-3

Tensile strength : ≥ 27 N/15mm

Elongation at break : ≥ 150 %

#### **Adhesive Data, 23°C**

FTM 1

Peel adhesion 180° on stainless steel (N/25mm)

- 20 min. residence: 19

- 24 hours residence: 25

- 1 week residence: 27

#### **Dimensional stability**

FTM 14

Shrinkage (1 week at 70°C) : < 0.5 mm

#### **Temperature ranges :**

Application : + 8°C to + 40°C

End-use : - 40°C to + 90°C

#### **Flammability**

ISO 3795

Sample mounted on aluminium : self-extinguishing.

#### **Solvent and chemical resistance**

Resistant to most oils and grease, fuel, aliphatic solvents, weak acids, salts and alkalis.

### PROCESSING

#### **Computer cutting**

Clean, quick, trouble-free cutting with most plotters. Adjustment of the cutting depth is important: if the cut is too deep this could result in the paper splitting and coming away with the adhesive when the vinyl is transferred to Application Tape.

#### **Application**

For matt products: we recommend the use of a High Tack Application tape in order to ensure a good transfer of all letters.

The transfer of the cut vinyl onto the Application Tape should always be performed by removing the liner from the pressure-sensitive material (i.e. with the PVC face downwards onto the working surface) and not by lifting off the Application Tape.

MACal 9800 HT CAST can be applied with the dry application method on curved surfaces. On flat surfaces the dry or the wet application method is suitable.

#### **Important remark**

All surfaces to which the material will be applied must be thoroughly cleaned from dust, grease or any contamination. The compatibility of paints and lacquers should be tested by the end-user, prior to use.

#### **Edge sealing**

Where exposure to chemicals and solvent spillage is likely to occur, edge sealing of decals with a varnish will prevent edge lift.

# MACal® 9800 BF CAST

*Technical Data Sheet*

**PRODUCT DESCRIPTION**

MACal 9800 BF CAST are cast vinyl films coated with a durable permanent micro-structured adhesive giving excellent dimensional stability. MACal 9800 BF CAST is specifically designed for computer cutting, fast weeding and easy application of large letters.

- 20 min. residence: 14
- 24 hours residence: 16
- 1 week residence: 18

**Dimensional stability** FTM 14  
Shrinkage (1 week at 70°C) : < 0.2 mm

**CONSTRUCTION**

**Face material :**  
Polymeric stabilized cast vinyl, 66 µm thick, cadmium-free.

**Temperature ranges :**  
Application : + 8°C to + 40°C  
End-use : - 40°C to + 90°C

**Adhesive :**  
Clear solvent based micro-structured permanent acrylic adhesive.

**Flammability** ISO 3795  
Sample mounted on aluminium : self-extinguishing.

**Liner :**  
Stable 145 gsm white kraft paper with grey backprinting.

**Solvent and chemical resistance**  
Resistant to most oils and grease, fuel, aliphatic solvents, weak acids, salts and alkalis.

**TYPICAL USES**

MACal 9800 BF CAST is designed for long term interior and exterior marking applications (vehicle marking, window graphics, signs...). The BF adhesive allows faster and trouble free application onto substrates.

**PROCESSING**

**Computer cutting**

Clean, quick, trouble-free cutting with most plotters. Adjustment of the cutting depth is important: if the cut is too deep this could result in the paper splitting and coming away with the adhesive when the vinyl is transferred to Application Tape. This BF version of MACal 9800 CAST should not be used for cutting small letters as there could be some edge lifting due to the reduced surface contact linked to the presence of air micro-channels.

MACal 9800 BF CAST provides ideal conformability over simple contours, rivets and corrugations.

**EXPECTED DURABILITY**

The expected vertical outdoor durability of the unprocessed product in central Europe (Zone 1) is up to:

10 years : white and black

This information is based on successful real life experience and artificial aging according to ISO 4892-2.

**Application**

The transfer of the cut vinyl onto the Application Tape should always be performed by removing the liner from the pressure-sensitive material (i.e. with the PVC face downwards onto the working surface) and not by lifting off the Application Tape.

MACal 9800 BF CAST should always be applied with the dry application method on flat to curved surfaces.

**Note :** Exposure to severe temperatures and ultraviolet light, as well as conditions in southern European countries, and also in tropical, sub-tropical or desert regions, will cause a more rapid deterioration. This also applies to polluted areas, high altitude, horizontal and south-facing exposure.

**Important remark**

All surfaces to which the material will be applied must be thoroughly cleaned from dust, grease or any contamination. The compatibility of paints and lacquers should be tested by the end-user, prior to use.

**SHELF LIFE**

2 years when stored at 15 to 25°C and ± 50 % relative humidity.

**Edge sealing and varnishing**

Where exposure to chemicals and solvent spillage is likely to occur, edge sealing of decals with a varnish will prevent edge lift. Correct varnishing of decals gives greater protection, and extends the use-life against prolonged effects of weathering, abrasion and other effects such as frequent cleanings.

**PHYSICAL PROPERTIES** (Typical values)

**Thickness (mm)** (Film + adhesive) ISO 534  
0.095

**Face Material Data, 23°C** DIN ISO 527-3  
Tensile strength : ≥ 27 N/15mm  
Elongation at break : ≥ 150 %

**Adhesive Data, 23°C** FTM 1  
Peel adhesion 180° on stainless steel (N/25mm)

# MACal® 9800 CAST

## Technical Data Sheet

### PRODUCT DESCRIPTION

MACal 9800 CAST are polymeric stabilized cast vinyl films coated with a durable permanent adhesive giving excellent dimensional stability.

MACal 9800 CAST is designed for computer cutting and fast weeding, even for small letters and fine lines.

### CONSTRUCTION

#### **Face material :**

Polymeric stabilized cast vinyl, 66 µm thick, cadmium-free. MACal 9800 CAST SL have a white tie-coated face at the back.

#### **Adhesive :**

Clear solvent based permanent acrylic adhesive.

#### **Liner :**

Stable 135 gsm white kraft paper with grey backprinting. For white vinyls the liner is coated with a blue silicone coating to improve the contrast with the film colour.

NB : **CONTRAST** ensures a clear view during the stripping process therefore improving productivity.

### TYPICAL USES

MACal 9800 CAST is designed for long term interior and exterior marking applications (vehicle marking, window graphics, signs...).

MACal 9800 CAST provides ideal conformability over flat to curved surfaces with rivets and simple corrugations.

MACal 9800 CAST SL are intense, vibrant colours for eye-catching markings.

### EXPECTED DURABILITY

The expected vertical outdoor durability of the unprocessed product in central Europe (Zone 1) is up to:

10 years : white and black.

Up to 8 years : colours.

5 years : metallics.

This information is based on successful real life experience and artificial aging according to ISO 4892-2.

**Note :** Exposure to severe temperatures and ultraviolet light, as well as conditions in southern European countries, and also in tropical, sub-tropical or desert regions, will cause a more rapid deterioration. This also applies to polluted areas, high altitude, horizontal and south-facing exposure.

### SHELF LIFE

2 years when stored at 15 to 25°C and ± 50 % relative humidity.

### PHYSICAL PROPERTIES (Typical values)

**Thickness** (mm) (Film + adhesive) ISO 534  
0.095 (0.100 for 9800 SL)

**Face Material Data, 23°C** DIN ISO 527-3

Tensile strength : ≥ 24 N/15mm

Elongation at break : ≥ 150 %

**Adhesive Data, 23°C** FTM 1

Peel adhesion 180° on brushed stainless steel (N/25mm)

- 20 min. residence : 16

- 24 hours residence: 18

- 1 week residence: 20

Peel adhesion 180° on mirror stainless steel (N/25mm)

- 20 min. residence : 11

- 1 week residence : 13

**Dimensional stability** FTM 14

Shrinkage (1 week at 70°C) : < 0.2 mm

(< 0.5mm for 9800 PRO SL)

#### **Temperature ranges :**

Application : + 8°C to + 40°C

End-use : - 40°C to + 90°C

**Flammability** ISO 3795

Sample mounted on aluminium : self-extinguishing.

#### **Solvent and chemical resistance**

Resistant to most oils and grease, fuel, aliphatic solvents, weak acids, salts and alkalis.

### PROCESSING

#### **Computer cutting**

Clean, quick, trouble-free cutting with most plotters. Adjustment of the cutting depth is important: if the cut is too deep this could result in the paper splitting and coming away with the adhesive when the vinyl is transferred to Application Tape.

#### **Application**

For matt products: we recommend the use of a high tack application tape in order to ensure a good transfer of all letters.

The transfer of the cut vinyl onto the Application Tape should always be performed by removing the liner from the pressure-sensitive material (i.e. with the PVC face downwards onto the working surface) and not by lifting off the Application Tape.

MACal 9800 CAST can be applied with the dry application method on curved surfaces. On flat surfaces the dry or the wet application method is suitable.

#### **Important remark**

All surfaces to which the material will be applied must be thoroughly cleaned from dust, grease or any contamination. The compatibility of paints and lacquers should be tested by the end-user, prior to use.

**Edge sealing**

Where exposure to chemicals and solvent spillage is likely to occur, edge sealing of decals with a varnish will prevent edge lift

**IMPORTANT NOTICE**  
**DISCLAIMER**

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